

SECTION B

EXHAUST SYSTEM

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DIVISION II

DESCRIPTION and OPERATION

80-3 DESCRIPTION OF EXHAUST SYSTEM

The single exhaust system is standard equipment on all 43, 44000 series models except, G.S. and G.S. 455. The 350 4 Bbl. hi-compression engines are available with the dual exhaust system. On the G.S. and G.S. 455 models, dual exhaust systems are standard equipment. Single exhaust is standard on all 45-46-48000 series cars. Dual exhaust systems are available as an option on LeSabre (with 455 engine), Wildcat and Electras.

The 43-44000 Series exhaust systems do not have resonators. Sportwagons have a tail pipe which crosses over just behind the rear axle. In all wagons, the tail pipe exits just behind the left rear tire; this reduces the possibility of having exhaust gas enter an open tail gate window.

All 45-46-48-49000 Series exhaust

pipes, plus the 43-44000 G.S. models, are of the double wall laminated type. This double layer pipe is used to muffle pipe "ring" which is set-up by the firing impulses of the individual cylinders; the life of the pipe is also greatly increased.

For long life, all single exhaust system mufflers and tail pipes are aluminized. On the 350 cubic inch 4 Bbl. hi-performance engines with dual exhaust systems, rusting is more rapid on the "cold" side, (the side having the exhaust manifold heat riser valve), all cold side mufflers have stainless steel inner shells, baffles and end caps. Both dual exhaust resonators are also constructed of a stainless steel construction. On the 455 cubic inch engines, all mufflers, single exhaust or dual, the mufflers are constructed of stainless steel due to the elimination of the exhaust manifold heat riser valve. On the dual systems both resonators are constructed of stainless steel.

All exhaust pipe connections to exhaust manifolds are of the ball joint type to allow angular movement for alignment purposes. On all single exhaust systems, the rear end

of the front exhaust pipe (crossover) assembly is also of the ball joint type. Rivierras have ball joints between the mufflers and resonators to allow accurate resonator alignment. All other connections are of the slip joint type. No gaskets are used in the entire system.

The muffler is of the oval-shaped dynamic flow type having very low back pressure. It is double wrapped of heavy gage aluminized steel with a layer of asbestos placed between wrappings to aid in reduction of noise transfer and to prevent any "oil-canning" effect. The exhaust system is supported by free hanging rubber-fabric mountings which permit free movement of the system but do not permit transfer of noise and vibration into the passenger compartment.

DIVISION III

SERVICE PROCEDURES

80-4 REMOVAL AND INSTALLATION OF EXHAUST SYSTEM PARTS

a. Removal and Installation of Muffler

The following instructions apply, in general, to all exhaust systems. For specific information, see the illustrations following this paragraph.

1. Remove U-bolts and clamps from muffler inlet and outlet nipples.
2. Split muffler inlet and outlet nipples on opposite sides so that they are loose on inner pipes. Be careful zotto damage inner pipes.
3. Disconnect front or intermediate exhaust pipe at forward end ball joint by removing bolts or nuts.
4. Pull exhaust pipe forward and twist to disengage from muffler. Lay exhaust pipe on floor.
5. Remove old muffler by pulling forward and twisting.
6. Subassemble exhaust pipe and new muffler on floor, tightening new U-bolt and nuts just snug so that muffler will move but will stay where moved.
7. Raise exhaust pipe-muffler subassembly into position and insatall new bolts or nuts at forward ball joint just snug.
8. Install new U-bolt and nuts at rear of muffler just snug.
9. Align muffler and exhaust pipe. See illustration that applies - Figures 80-16 through 80-24.
10. Tighten all bolts and nuts.

b. Removal and Installation of Resonator

1. Remove tail pipe clamp bolt and spread clamp so that resonator-tail pipe assembly will slide through clamp.
2. Split resonator inlet nipple on opposite sides so that it is loose on rear exhaust pipe. Be careful not to damage exhaust pipe.
3. Slide old resonator to rear and then forward out of tail pipe clamp.
4. Install new hanger where necessary.
5. Install new resonator-tail pipe assembly.
6. Install new U-bolt and clamp. Install new tail pipe hanger bolt. Tighten all nuts so that resonator can be moved, but will stay where moved.
7. Align resonator assembly. See illustration that applies - Figures 80-16 through 80-24.
8. Tighten all clamps.

c. Removal and Installation of Front or Intermediate Exhaust Pipe

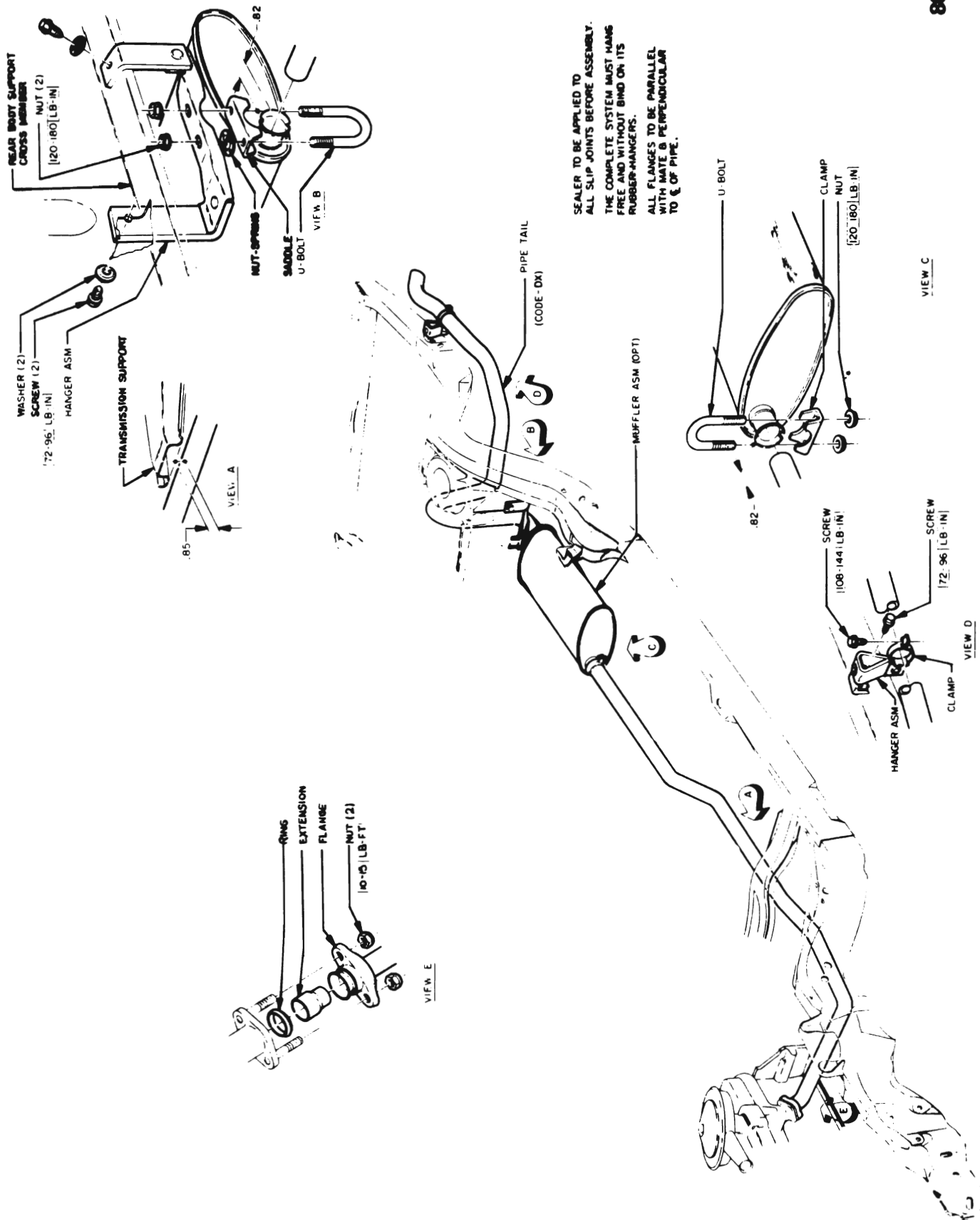
1. Cut off defective exhaust pipe just forward of muffler nipple.
2. Remove U-bolt and clamp from forward muffler nipple. Disconnect exhaust pipe at forward end ball joint by removing bolts or nuts.
3. Split stub end of exhaust pipe in

muffler, being careful not to damage muffler nipple. Collapse stub end and remove.

4. Raise new exhaust pipe into position and install new bolts or nuts at forward ball joint just snug.
5. Install new U-bolt and clamp just snug.
6. Align exhaust pipe. See illustration that applies - Figures 80-16 through 80-24.
7. Tighten all bolts and nuts.

d. Removal and Installation of Tail Pipe

1. Raise car so that rear axle and frame are separated as far as possible.
2. Cut off defective tail pipe just rearward of muffler nipple.
3. Remove tail pipe clamp bolt and spread clamp. Remove old tail pipe.
4. Split stub end of tail pipe in muffler, being careful not to damage muffler nipple. Collapse stub end and remove.
5. Position new tail pipe over rear axle and into position.
6. Install new U-bolt and clamp. Install new tail pipe hanger clamp bolt. Tighten all nuts just snug.
7. Align tail pipe. See Figures 80-16 through 80- 24.
8. Tighten all nuts.



80-16

Figure 80-16 Exhaust System · L-6 Skylark and Skylark 350

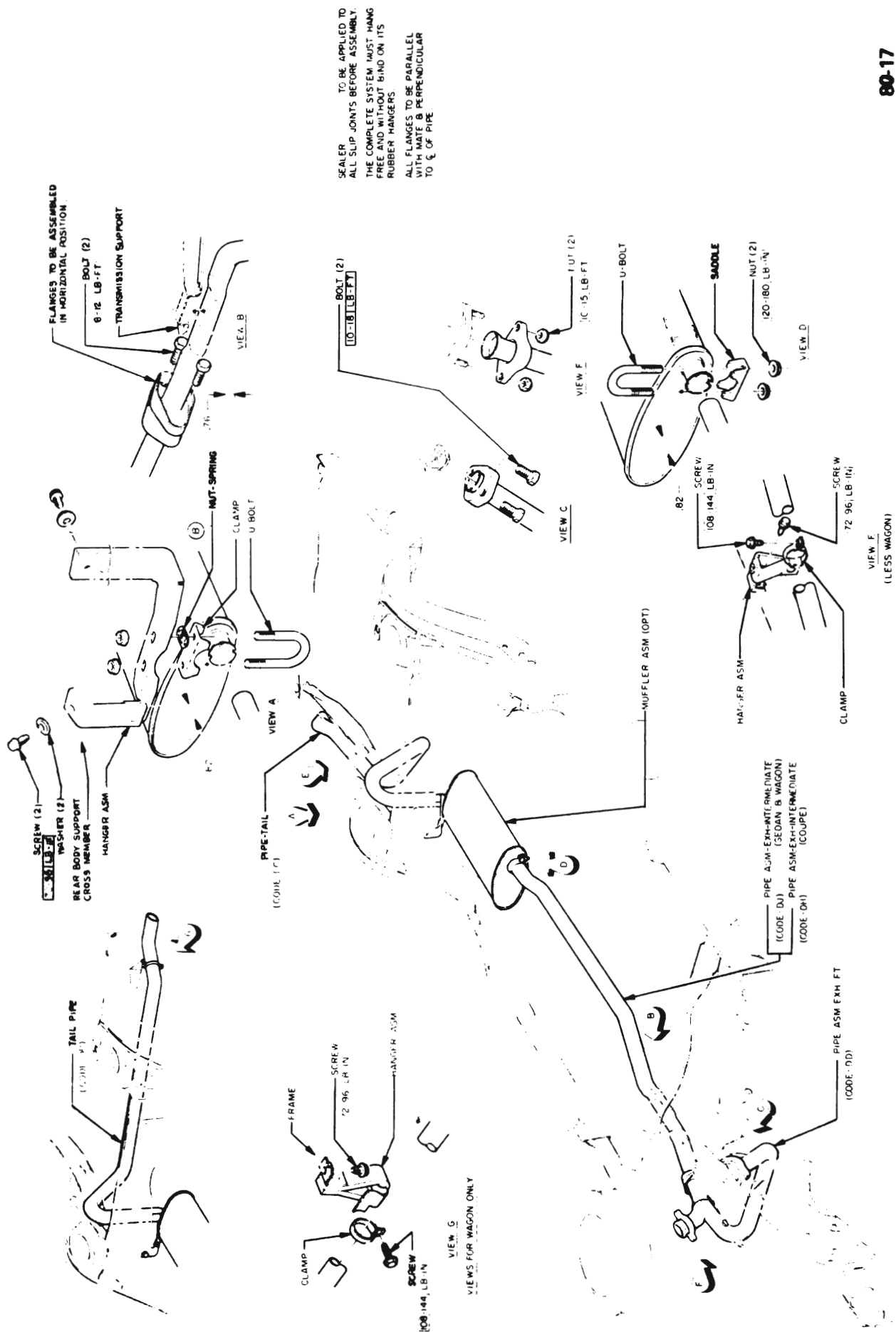
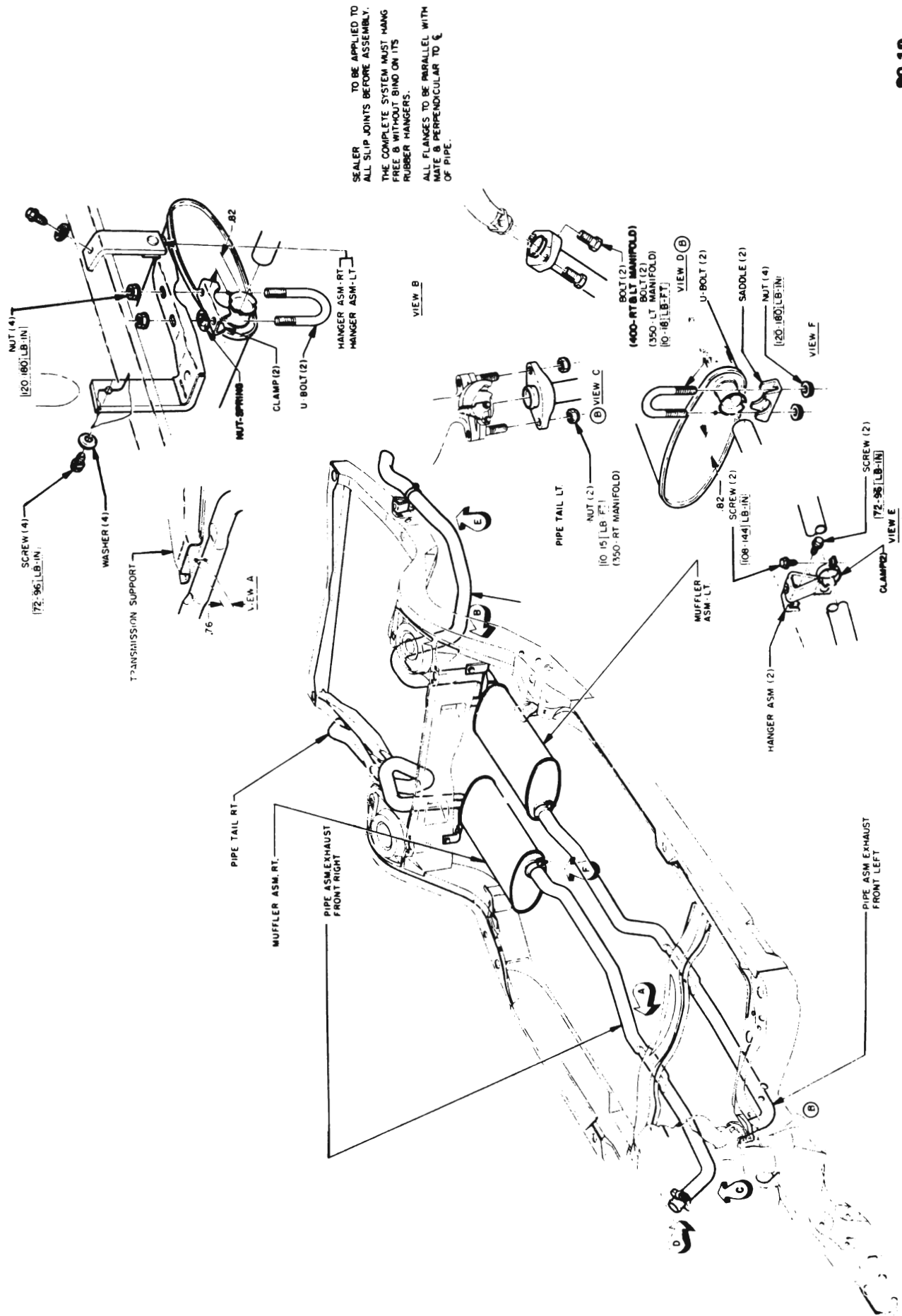
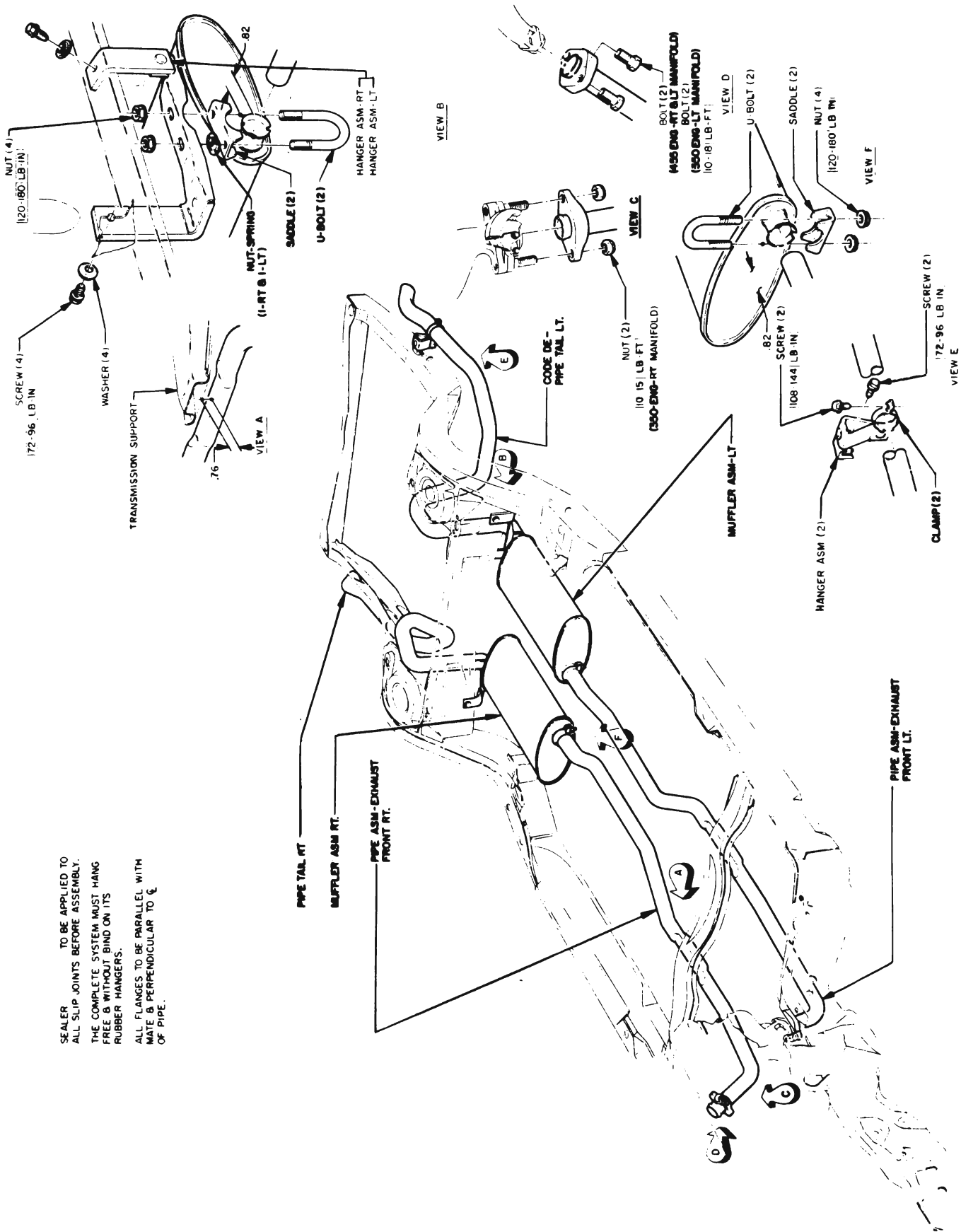


Figure 80-17 Exhaust System - V-8 Skylark, Skylark 350, and Sport Wagon Except G.S.



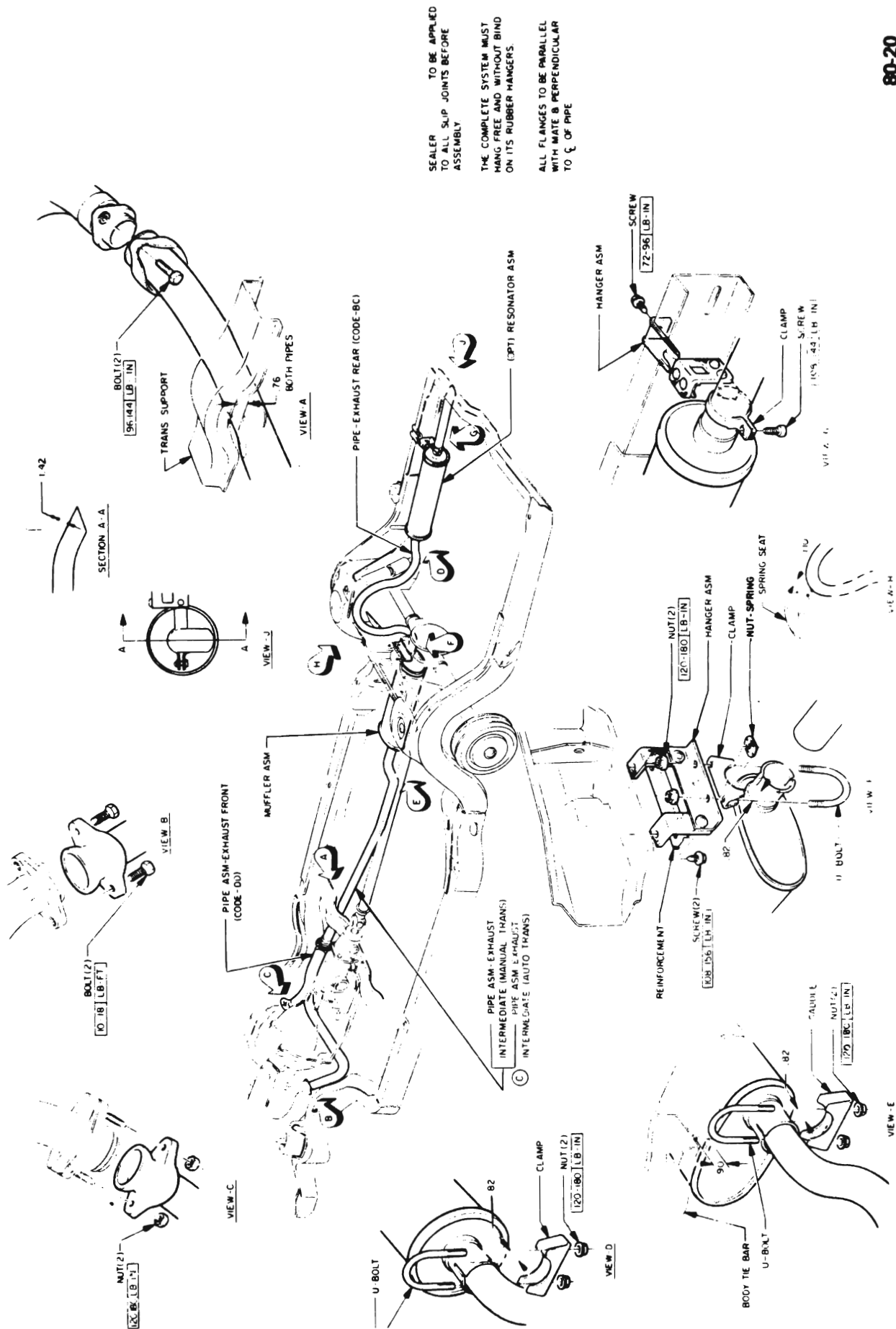
80-18

Figure 80-18 Exhaust System · 350 4BBL · High Performance · Dual Exhaust System



SEALER TO BE APPLIED TO ALL SLIP JOINTS BEFORE ASSEMBLY. THE COMPLETE SYSTEM MUST HANG FREE & WITHOUT BIND ON ITS RUBBER HANGERS. ALL FLANGES TO BE PARALLEL WITH MATE & PERPENDICULAR TO ϕ OF PIPE.

Figure 80-19 Exhaust System - G.S. and G.S. 455 - Dual Exhaust



80-20

Figure 80-20 · Single Exhaust System · LeSabre

SEALER 9985020 TO BE APPLIED TO ALL SLIP JOINTS BEFORE ASSEMBLY.

THE COMPLETE SYSTEM MUST HANG FREE AND WITHOUT BIND ON ITS RUBBER HANGERS.

ALL FLANGES TO BE PARALLEL WITH MATE & PERPENDICULAR TO ϕ OF PIPE.

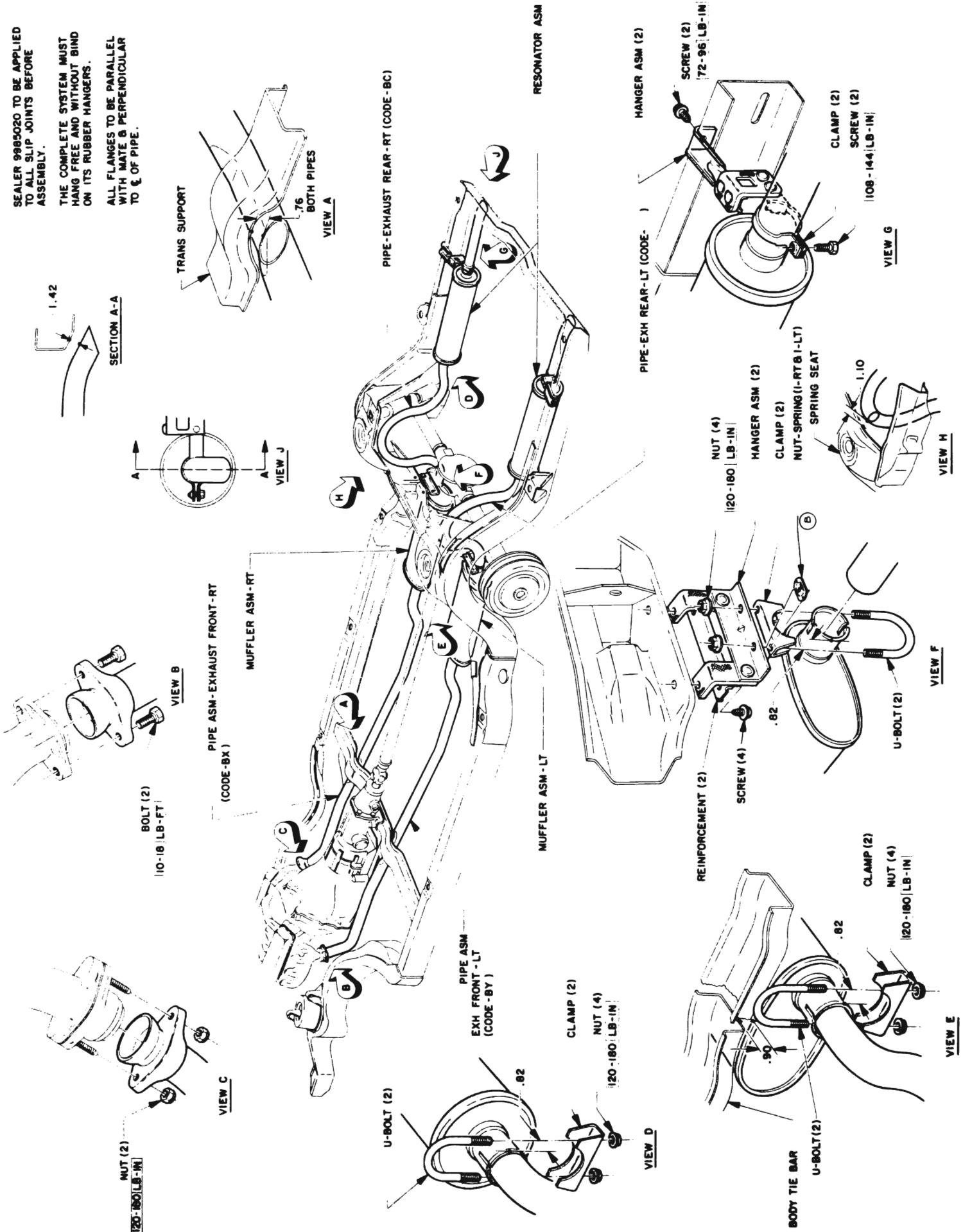
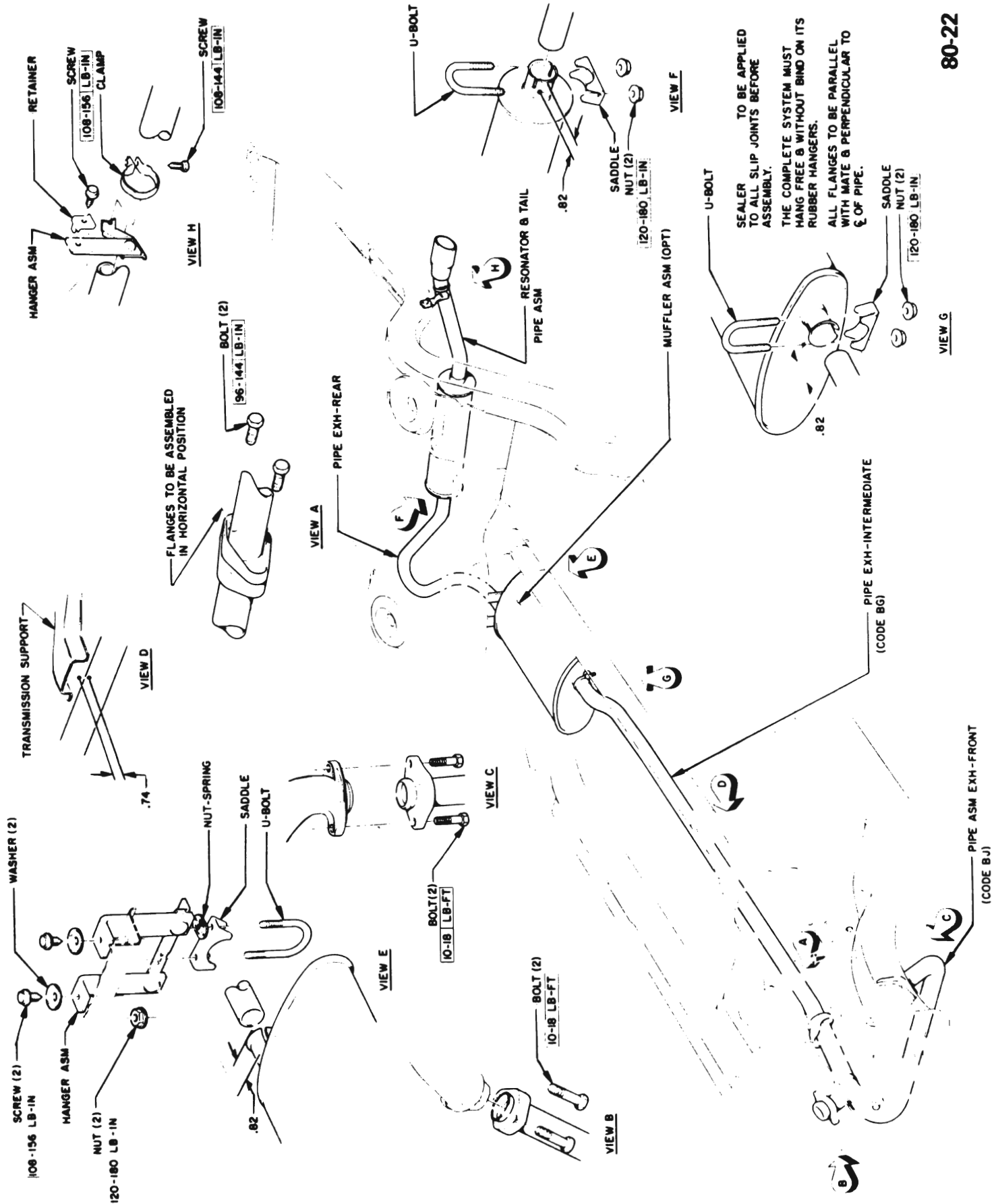
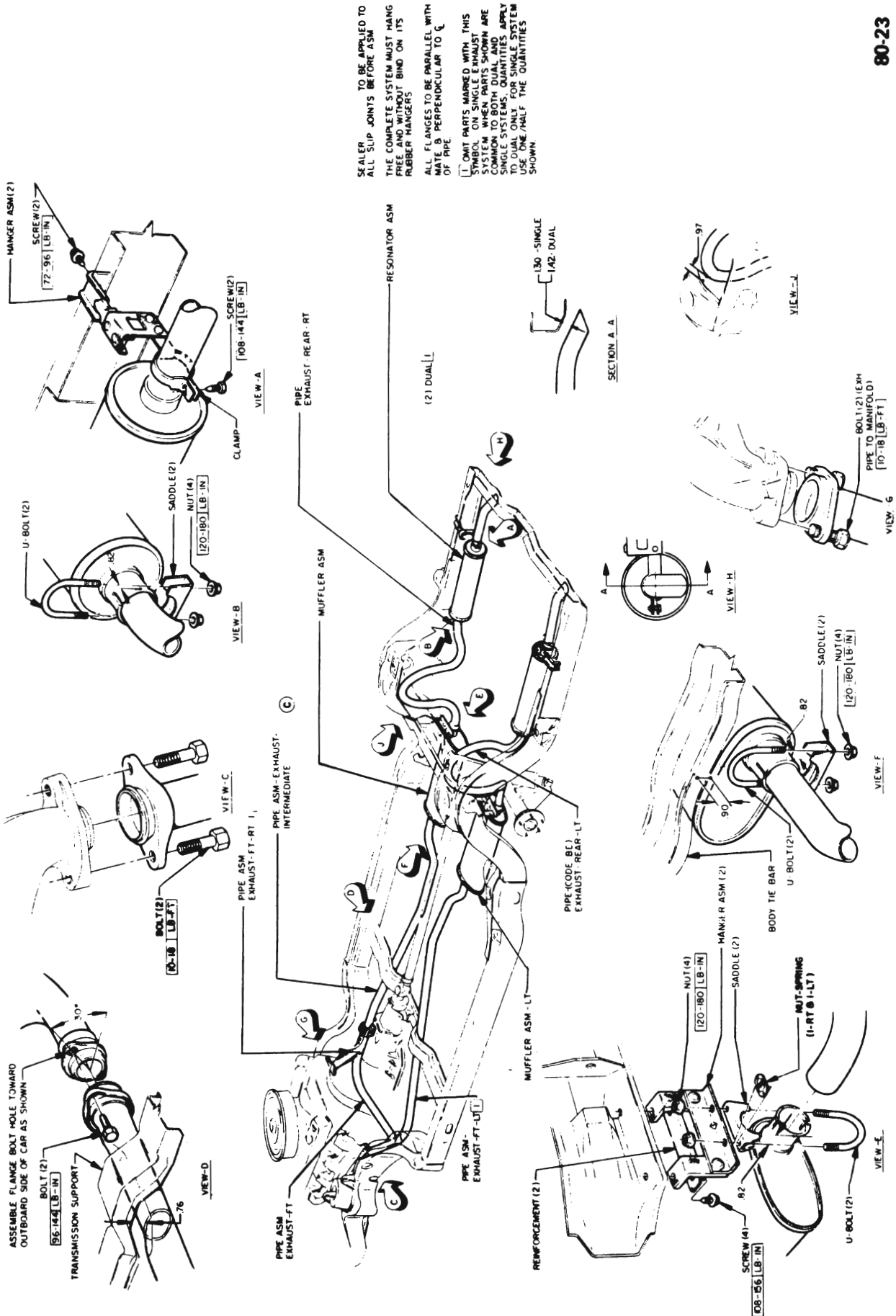


Figure 80-21 Dual Exhaust System - LeSabre



80-22

Figure 80-22 · Single Exhaust System · Estate Wagon

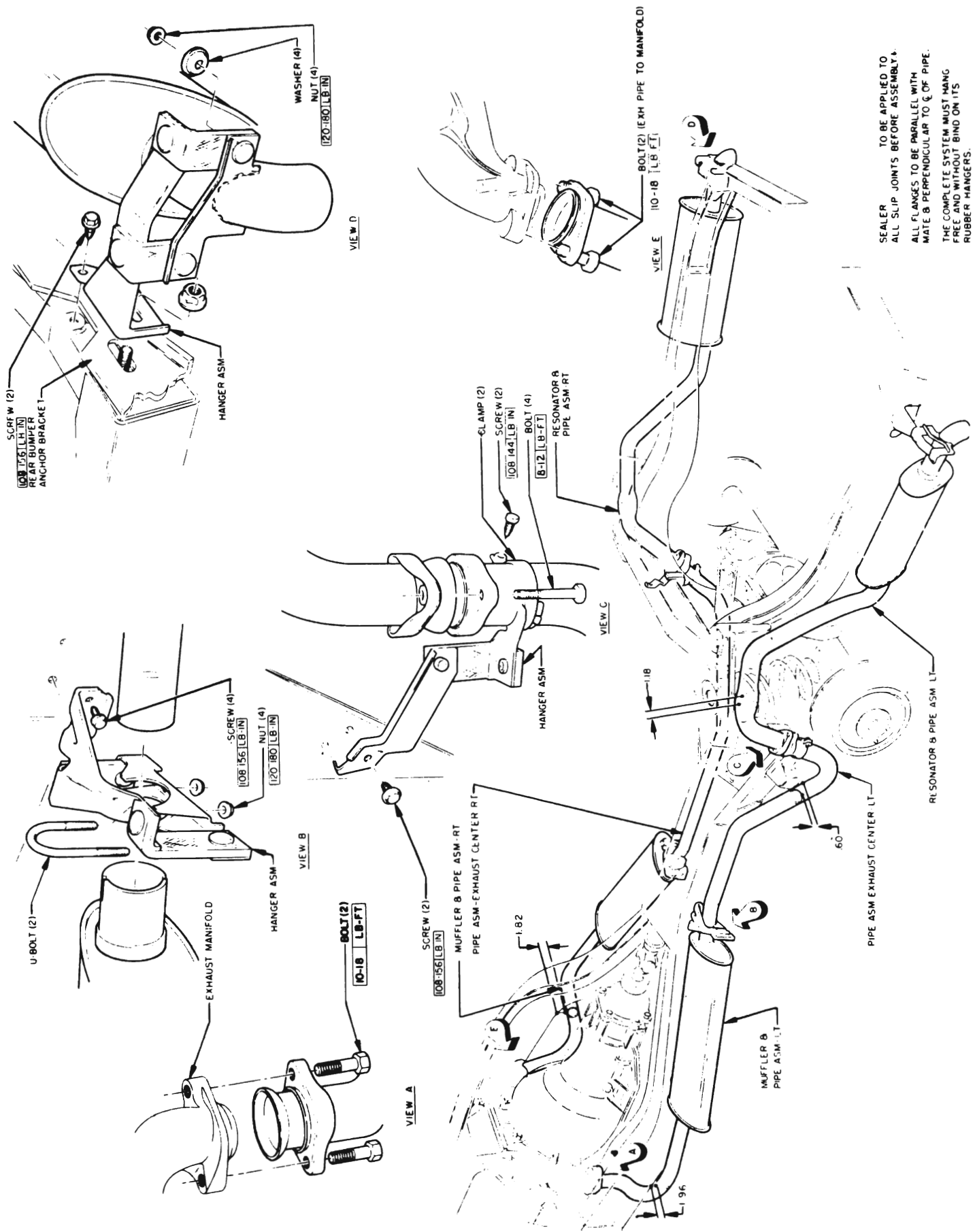


SEALER TO BE APPLIED TO ALL SLIP JOINTS BEFORE ASM THE COMPLETE SYSTEM MUST HANG FREE AND WITHOUT BIND ON ITS RUBBER HANGERS

ALL FLANGES TO BE PARALLEL WITH MATING PERPENDICULAR TO ψ

[] OMIT PARTS MARKED WITH THIS SYMBOL ON SINGLE EXHAUST SYSTEM WHEN PARTS SHOWN ARE SINGLE SYSTEMS. QUANTITIES APPLY TO DUAL ONLY. FOR SINGLE SYSTEM USE ONE /HALF THE QUANTITIES SHOWN.

Figure 80-23 · Dual and Single Exhaust Systems · Wildcat and Electra



SEALER TO BE APPLIED TO ALL SLIP JOINTS BEFORE ASSEMBLY. ALL FLANGES TO BE PARALLEL WITH MATE & PERPENDICULAR TO Q OF PIPE. THE COMPLETE SYSTEM MUST HANG FREE AND WITHOUT BIND ON ITS RUBBER HANGERS.

80-24

Figure 80-24 - Exhaust System - Riviera